

The Lake Merritt Institute

LAKE TRASH REMOVAL, FOUNTAINS, EDUCATION, LAKE MANAGEMENT EXPERTISE

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LAKE MERRITT'S FIRST AERATOR: Its only a pilot project now, but if it works, a Lake-wide aeration / mixing system could solve our oxygen problems. That in turn could eliminate the EPA listing of Lake Merritt as impaired due to low oxygen (which would make state and federal regulators very happy). As you know, the beneficial uses of Lake Merritt are often impaired by low oxygen levels in the bottom (saltier) layer of water. By mixing this bottom layer with the oxygen rich upper layer, the entire water column should meet the water quality guidelines.



A seagull checks out an air compressor, located in the green box by the Sailboat House.

Installed by the Lake Merritt Institute, the pilot project was funded by Measure DD , as approved by City Council last July. It features two lines, one of which will be left off until the end of the test (sometime this summer). At that time, it will be determined if the growth of organisms on several types of diffuser heads will prevent the system from operating.

Only a smattering of bubbles can be seen in the Lake, just offshore of the compressor where several birds have appeared to be taking a bubble bath in their new "spa." Barely visible, the disturbance at the surface has resulted in only a few calls from curious folks. If a Lake-wide system is installed, it could include 140 diffusers, which would operate whenever oxygen sensors detected levels below the 5 parts per million guideline. Working properly, it will prevent a dead zone, such as the 9,000 square mile dead zone offshore of the Mississippi river.

EARTH DAY A SUCCESS: About 80 dedicated volunteers registered at the Lake to do good deeds for the environment last month, the 25th anniversary of Earth Day. When they were done, the entire Lake shoreline had been cleaned, free T-shirts were distributed and lots of pizza consumed.

City manager Deborah Edgerly participated, deftly driving around in a maintenance cart with assistant Public Works director Brooke Levin. Thanks to City staff (including the Fire Department) and all the volunteers who gave up a Saturday morning to make Oakland a better place to live.



INSTITUTE CHOSEN – CONTRACT TO GO BEFORE COUNCIL: Over two hundred Requests for Qualifications for the Clean Lake Contract were sent to local and area environmental consultants and organizations by the City in March. Seven firms attended a pre-submittal meeting and two submittals were received. A panel of City Public Works Agency, City Project Delivery Division and County Public Works Agency members decided that the Lake Merritt Institute team had the highest rating based on seven criteria. Included on our team for the two year, \$300,000 contract are the Peralta Services Corporation and Geomatrix consultants, both local firms.

A recommendation signed by the City Manager has been forwarded to your City Council where it will be considered by the Public Works Committee on May 10th and (if approved) by full Council on May 17th. The new contract would begin on June 1st, allowing continued use of volunteers and staff to keep Lake Merritt clean, the monitoring of water quality, and education to improve runoff from the watershed. Also included in the performance standards are providing technical assistance to the City and participation in meetings of the Lake Merritt Water Quality Technical Committee.



A Horned Grebe in breeding plumage. These birds are normally gray, black and white.

WHAT ARE OTHER PLACES DOING TO IMPROVE WATER QUALITY? To answer this question, Institute Director Dr. Richard Bailey journeyed to Chicago where the US Environmental Protection Agency and the North American Lake Management Society recently held their 18th Annual Lakes Conference. He found out that:

- The City of Eagan, MN enacted a \$4 tax to fund a storm water control program in 1990. Alarmed by a 30% increase in watershed impervious area between 1990 and 2000, they increased the tax to \$7, enough to fund a US EPA National First Place Program Award for Water Resources Management, Public Education, Public Participation, Interagency Coordination and Special Projects and Studies.

- The City of Seattle is spending 5 million dollars a year to retrofit streets (see before and after at www.uglystreet.org and www.seattle.gov/util/naturalsystems). The “SEA Street” project resulted in a **98% reduction on total runoff volume**, which translates into a lot less urban runoff, lower downstream treatment costs, and better water quality. It also resulted in happy homeowners, a happy mayor, and a realization that fire trucks can use the combined sidewalk and street (rather than mandating a wider street for emergency access). Now that’s thinking outside the pipe.
- Philadelphia has 95 water quality monitoring stations, has prioritized 3,000 pollution sources, and is pursuing porous pavement, bio-retention and surface infiltration at playgrounds, street medians and schools.
- The Washington Department of Ecology is currently preparing 670 TMDL’s (regulations establishing Total Maximum Daily Loads for specific pollutants) for water bodies listed as impaired. The listing resulted from a lawsuit by an environmental group. Most of the TMDL’s are for fecal coliform bacteria, but some are for low oxygen, for which Lake Merritt is also listed. However, our regional water board has decided not to require a TMDL.

OTHER PEARLS OF WISDOM FROM THE CONFERENCE: We also learned that the source of fecal coliform bacteria (sewage, waterfowl or runoff?) can be determined by DNA analysis as was done by Purdue University for Lake County Illinois. Cost? About \$12,000. But compare that to the cost of hundreds of laboratory tests trying to determine the source of bacteria.

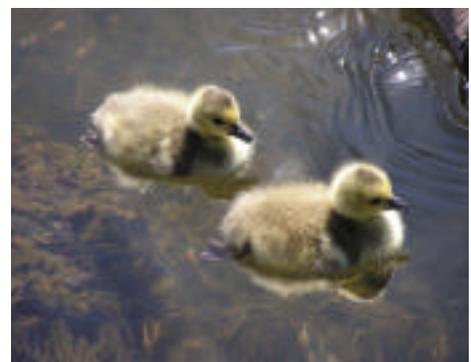
And, did you know that the “Center for Watershed Protection” has a publications catalog that you can order online at www.cwp.org? This non-profit organization offers one, two or three day workshops on customized watershed planning, stormwater management and better site design topics. Also provided are Watershed Institutes to create skilled watershed leaders, multimedia presentations and model ordinances (go to www.stormwatercenter.net).

Have you visited the “Watershed Academy” website at www.epa.gov/watertrain? This 16 module watershed training is also available on a CD published in July, 2003. Don’t like that? Then enroll in Villanova University’s Urban Stormwater classes taught by Dr. Robert Traver. There is also an on-line watershed management program in Lansing, Michigan.



An “Unknown Island” Appeared in the Lake recently. This art project is sponsored by the City’s Cultural Arts Department.

Two new reasons to demand more storm drain filters.



To contribute to the Lake Merritt Institute, contact us at 510-238-2290 or 568 Bellevue Avenue, Oakland, CA 94610.

The Lake Merritt Institute is sponsored and supported by the Oakland Public Works Agency and members like you.